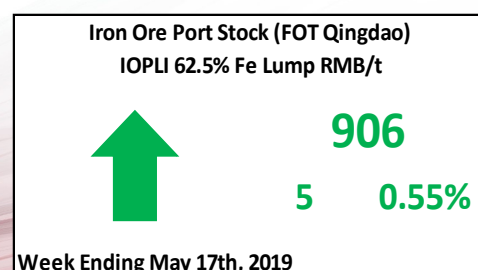
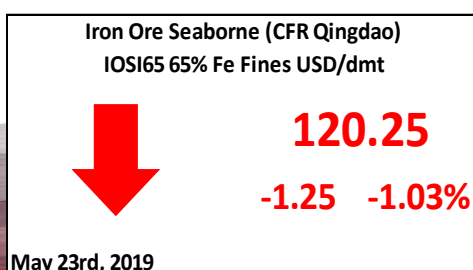
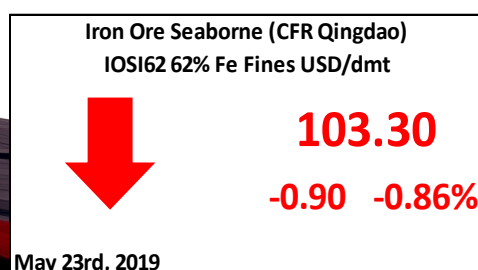
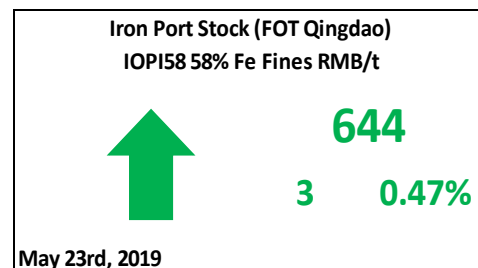
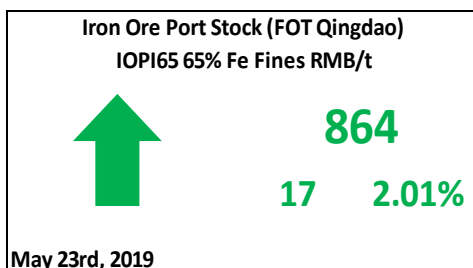
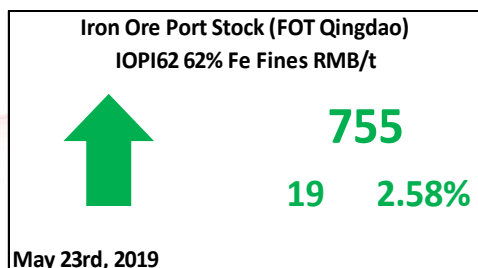


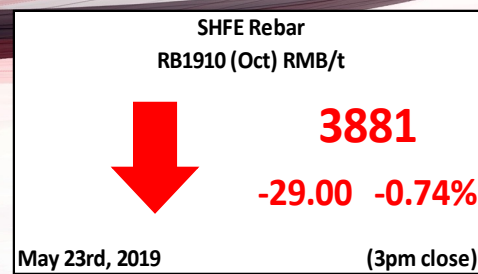
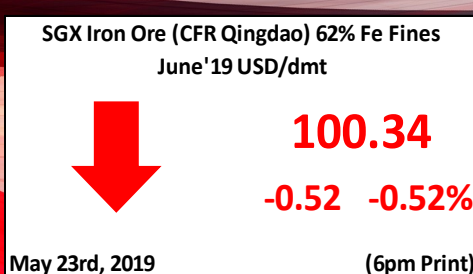
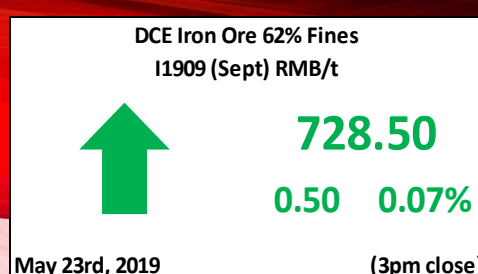


MMi Dashboard

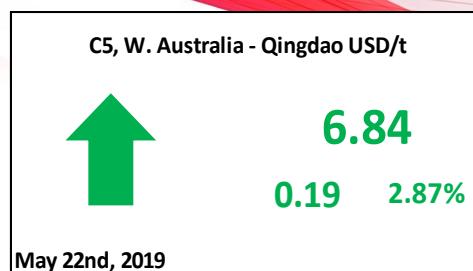
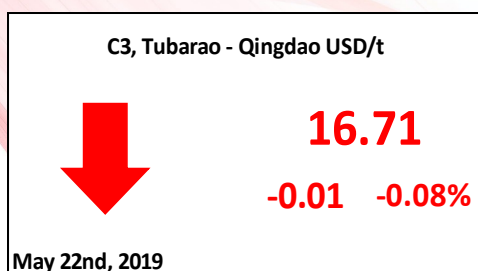
Iron Ore Price Indices



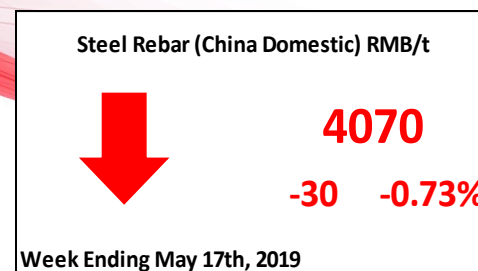
Exchange Traded Contracts



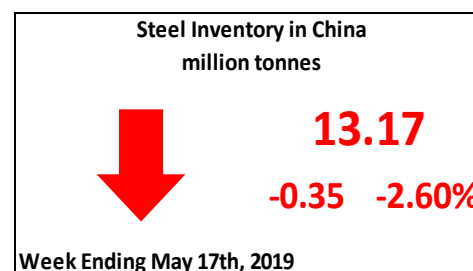
Freight Rates



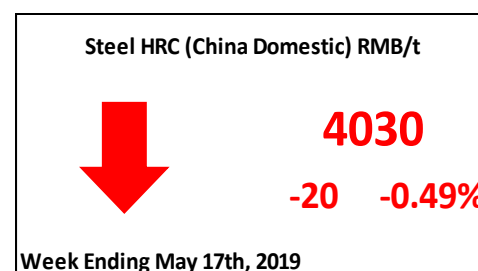
Steel Price



Inventory Levels



Steel Price



IRON ORE PORT STOCK INDEX (IOPI)

May 23rd, 2019		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne ¹						
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²	Price	Change	Change %	MTD	YTD	Low ²	High ²
IOPI62	62% Fe Fines	755	19	2.6%	707	646	453	755	101.36	2.65	2.7%	95.59	86.66	61.66	101.36
IOPI58	58% Fe Fines	644	3	0.5%	622	559	317	644	86.83	0.43	0.5%	84.62	74.63	41.71	86.83
IOPI65	65% Fe Fines	864	17	2.0%	793	727	559	864	116.55	2.36	2.1%	107.71	98.10	77.70	116.55

IRON ORE SEABORNE INDEX (IOSI)

MARKET COMMENTARY

May 23rd, 2019		CFR Qingdao, USD/dry tonne							Some traders remained active today as they are still relatively positive on the iron ore market. The higher costs of seaborne arrivals were preventing traders selling at low prices and therefore the total concluded transactions today were up. On the other hand, there are still some mills who were cautious as iron ore prices keep moving higher. They prefer to wait until next week to see if prices were still to be moving higher. According to SMM, some mills have already increased their demand for domestic concentrates given its better cost performance.							
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ³	High ³								
IOSI62	62% Fe Fines	103.30	-0.90	-0.86%	96.65	87.30	62.95	104.20								
IOSI65	65% Fe Fines	120.25	-1.25	-1.03%	113.77	101.18	83.20	121.50								

IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending May 17th, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne ⁴						
Index	Fe Content	Price	W-o-W	Change %	MTD	YTD	Low ³	High ³	Price	W-o-W	Change %	MTD	YTD	Low ³	High ³
IOPLI62	62.5% Fe Lump	906	5	0.6%	899	849	575	906	115.09	-0.77	-0.66%	115.34	109.30	76.66	115.86

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

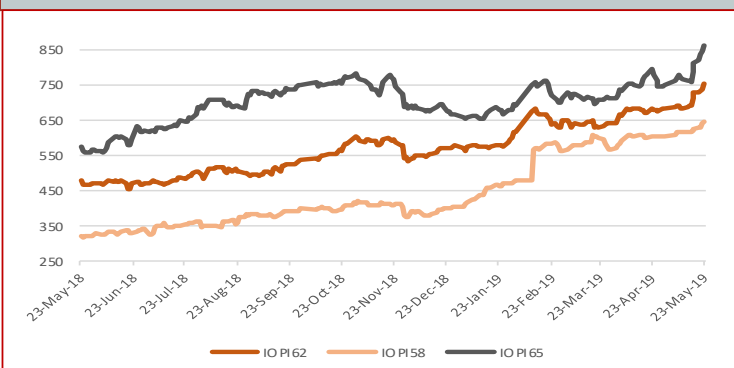
Week Ending May 17th, 2019				RMB/tonne (excluding tax) ⁴				USD/tonne (excluding tax) ⁴			
Province	Region	Product	Basis	This week	Change %	Low ²	High ²	This week	Change %	Low ²	High ²
Hebei	Hanxing	66% Fe Concentrate	Dry	845	0.7%	592	845	123.35	-0.65%	91.97	124.15
Hebei	Qian'an	65% Fe Concentrate	Dry	795	0.0%	635	815	116.05	-1.35%	100.26	117.64
Liaoning	Anshan	65% Fe Concentrate	Wet	605	0.0%	450	745	88.32	-1.35%	68.21	89.53
Shandong	Zibo	65% Fe Concentrate	Dry	835	1.8%	655	860	121.89	0.45%	99.75	127.11

Week Ending May 17th, 2019

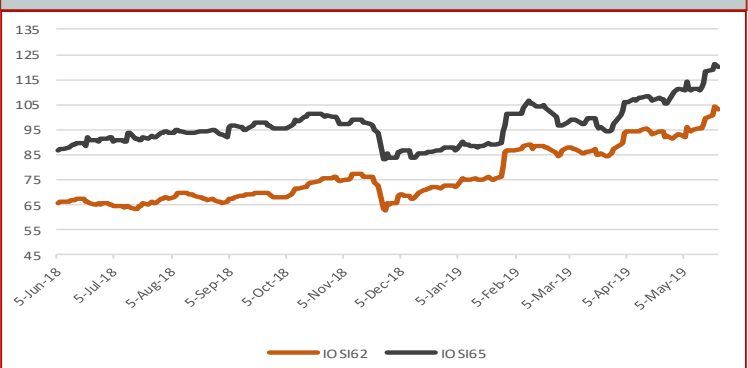
This week	Change %	Low ²	High ²	
China Mines Concentrate Composite Index RMB/WT	690.77	0.9%	535.58	686.95

¹ Exchange rate applied: RMB/USD = 6.8994 ² Last 12 months ³ Since June 1
⁴ Weekly exchange rate applied: RMB/USD 6.8503

IRON ORE PORT INDEX, FOT QINGDAO (RMB/WT)



IRON ORE SEABORNE INDEX, CFR QINGDAO (USD/DMT)



IRON ORE PORT STOCK INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

May 23rd, 2019		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	January	February	March	April	MTD	QTD	YTD	January	February	March	April	MTD	QTD	YTD
IOPI62	62% Fe Fines	580	654	639	675	707	688	646	72.55	76.16	87.09	85.37	95.59	93.84	86.66
IOPI58	58% Fe Fines	448	569	583	600	622	609	559	50.47	57.99	75.22	77.49	84.62	83.12	74.63
IOPI65	65% Fe Fines	670	733	714	753	793	769	727	99.05	88.65	98.08	95.78	107.71	105.43	98.10

IRON ORE SEABORNE INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

FREIGHT RATES

May 23rd, 2019		CFR Qingdao, USD/dry tonne							May 22nd, 2019						
Index	Fe Content	January	February	March	April	MTD	QTD	YTD	FREIGHT RATES - DRY BULK US\$/wet tonne						
Index	Fe Content	January	February	March	April	MTD	QTD	YTD	Route	Designation	Change	Change %	Low ²	High ²	
IOSI62	62% Fe Fines	76.09	87.39	86.18	93.42	96.65	94.77	87.30	W. Australia - Qingdao	C5	6.84	0.19	2.87%	4.39	10.00
IOSI65	65% Fe Fines	89.92	102.56	97.22	106.75	113.77	109.67	101.18	Tubarao - Qingdao	C3	16.71	-0.01	-0.08%	11.61	24.76

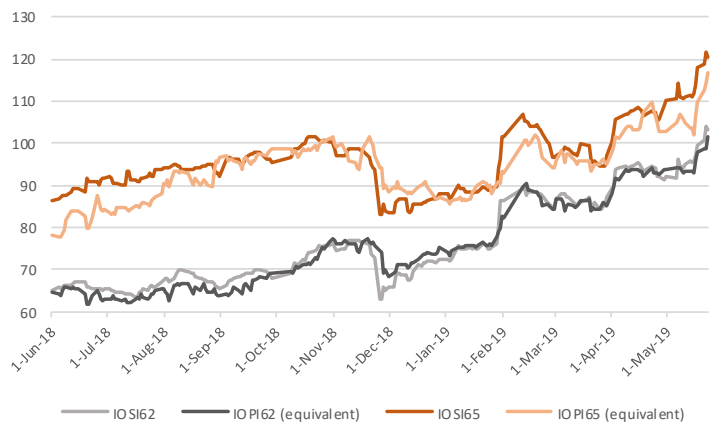
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending May 17th, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne ¹						
Index	Fe Content	January	February	March	April	MTD	QTD	YTD	January	February	March	April	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	782	842	858	872	899	884	849	96.21	94.22	99.57	111.03	115.34	113.98	109.33

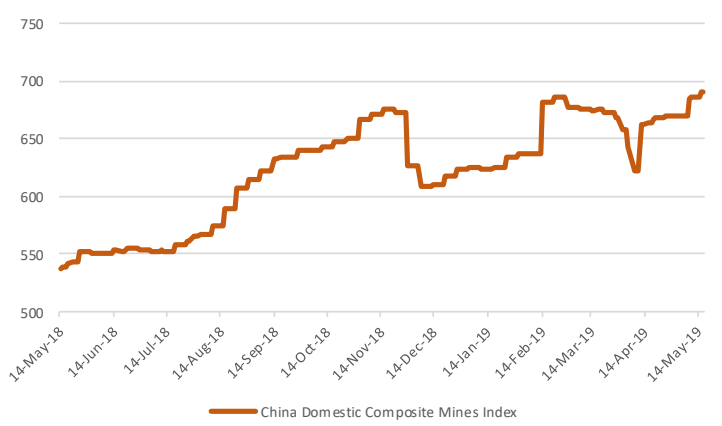
IRON ORE INDEX PREMIUMS/DISCOUNTS

May 23rd, 2019				PORT STOCK INDEX (RMB/WT)		May 23rd, 2019				SEABORNE INDEX (USD/DMT)	
Index	Fe Content	Spread to IOPI62	% Spread to IOPI62	Index	Fe Content	Spread to IOSI62	% Spread to IOSI62				
IOPI58	58% Fe Fines	-111	-14.70%	IOSI65	65% Fe Fines	16.95	16.41%				
IOPI65	65% Fe Fines	109	14.44%								

IRON ORE INDEX COMPARISONS (USD/DMT)



CHINA DOMESTIC COMPOSITE MINES INDEX (RMB/Wet Tonne, including VAT)



IRON ORE BRAND SPOT PRICE ASSESSMENTS

May 23rd, 2019				May 23rd, 2019			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	731	20	-24	Roy Hill	100.30	-0.90	-3.00
SIMEC Fines	732	24	-23	SIMEC Fines	98.72	-0.90	-4.58
PB Fines	737	19	-18	PB Fines	102.77	-0.90	-0.53
Newman Fines	763	19	8	Newman Fines	105.30	-0.91	2.00
MAC Fines	739	22	-16	MAC Fines	99.87	-0.90	-3.43
Jimblebar Blended Fines	713	19	-42	Jimblebar Blended Fines	97.35	-0.90	-5.95
Carajas Fines	875	18	120	Carajas Fines	119.40	-1.61	16.10
Brazilian SSF	802	22	47	Brazilian SSF	108.30	-1.21	5.00
Brazilian Blend Fines	788	19	33	Brazilian Blend Fines	107.42	-1.09	4.12
RTX Fines	714	20	-41	RTX Fines	97.65	-0.90	-5.65

May 23rd, 2019			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	609	2	-35
FMG Blended Fines	646	2	2
Robe River	603	2	-41
Western Fines	636	2	-8
Atlas Fines	620	2	-24
Yandi	656	3	12

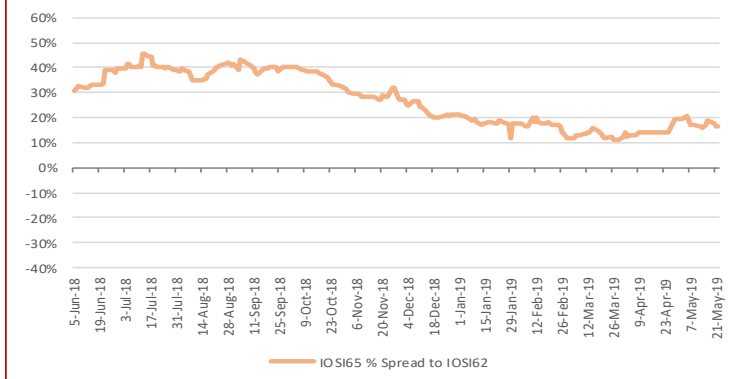
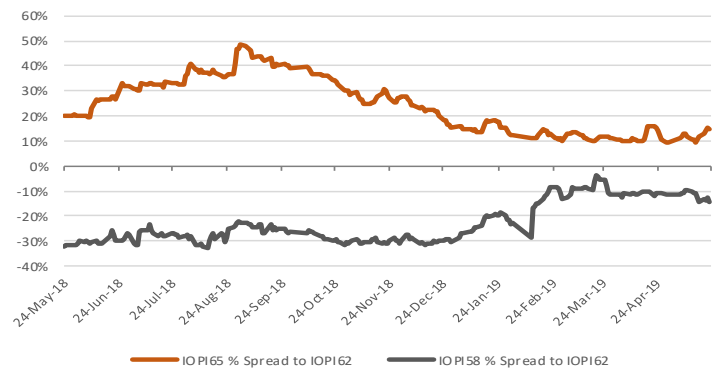
IRON ORE INDEX NORMALISATION DIFFERENTIALS

Port Stock Index Product Differentials (RMB/wet tonne)				Seaborne Index Product Differentials (USD/dry tonne)			
	Applicable range	Value	Change		Applicable range	Value	Change
1% Fe	High Grade Fe 60 - 63%	9.00	-1.00	1% Fe	High Grade Fe 60 - 63%	2.25	0.00
	High Grade Fe 63 - 64%	20.00	0.00		High Grade Fe 63 - 64%	3.25	-0.25
	High Grade Fe 64 - 65%	20.00	0.00		High Grade Fe 64 - 65%	3.25	-0.25
	High Grade Fe 65 - 65.5%	20.00	0.00		High Grade Fe 65 - 65.5%	3.25	-0.25
	Low Grade Fe	13.00	0.00				
1% Alumina	High Fe Grade Al <2.25%	42.00	0.00	1% Alumina	High Fe Grade Al <2.25%	4.00	-0.25
	High Fe Grade Al 2.25-4%	0.00	0.00		High Fe Grade Al 2.25-4%	1.50	0.00
	Low Fe Grade Al <2.25%	48.00	0.00				
	Low Fe Grade Al 2.25-4%	25.00	2.00				
1% Silica	High Fe Grade Si <4%	10.00	0.00	1% Silica	High Fe Grade Si <4%	1.75	0.00
	High Fe Grade Si 4-6.5%	9.00	-1.00		High Fe Grade Si 4 - 6.5%	0.00	0.00
0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	6.00	0.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.25	0.00
	High Fe Grade 0.115%<P<0.15%	8.00	0.00		High Fe Grade 0.115%<P<0.15%	0.75	0.00
	Low Fe Grade 0.09<P<0.1%	10.00	0.00				

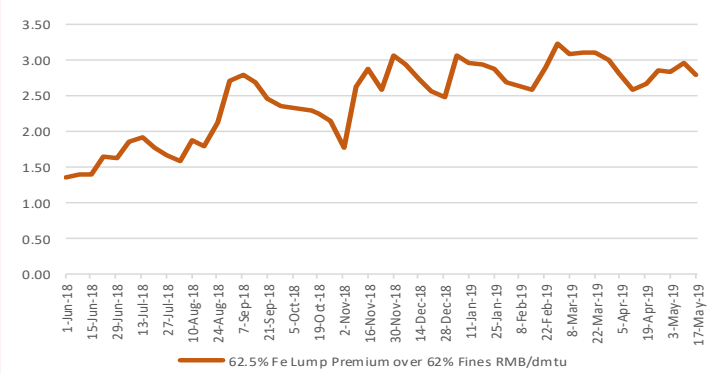
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

Port	Value	Change	Port	Value	Change	Port	Value	Change	Port	Value	Change
Bayuquan	-35.00	0.00	Fangcheng	-5.00	0.00	Lanshan	0.00	0.00	Qingdao	0.00	0.00
Beilun	5.00	0.00	Jiangyin	-30.00	0.00	Lianyungang	-5.00	0.00	Rizhao	0.00	0.00
Caofeidian	0.00	0.00	Jingtang	0.00	0.00	Majishan	0.00	0.00	Shekou	0.00	0.00
Dalian	-35.00	0.00	Lanqiao	0.00	0.00	Nantong	-30.00	0.00	Tianjin	-15.00	5.00

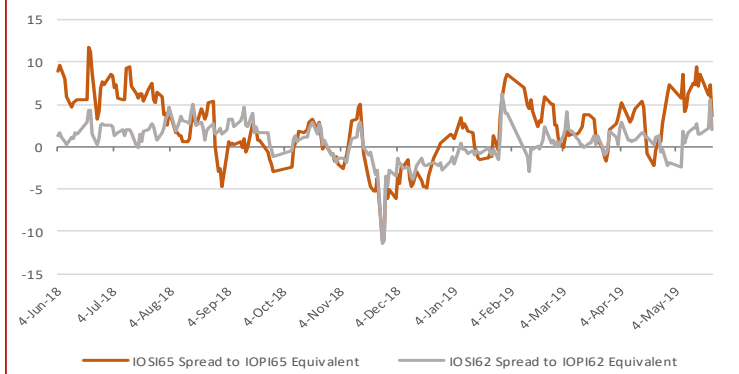
IRON ORE INDEX PREMIUMS/DISCOUNTS



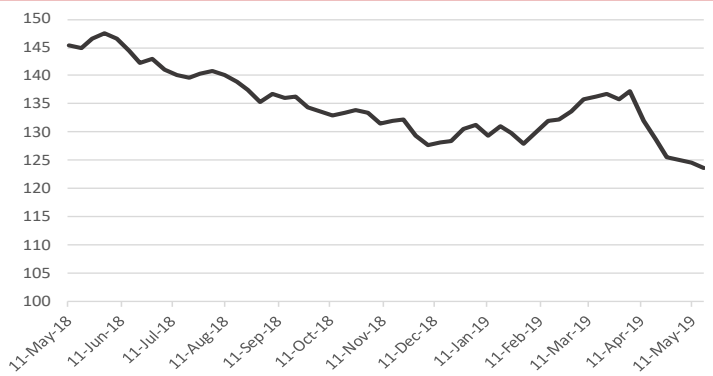
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



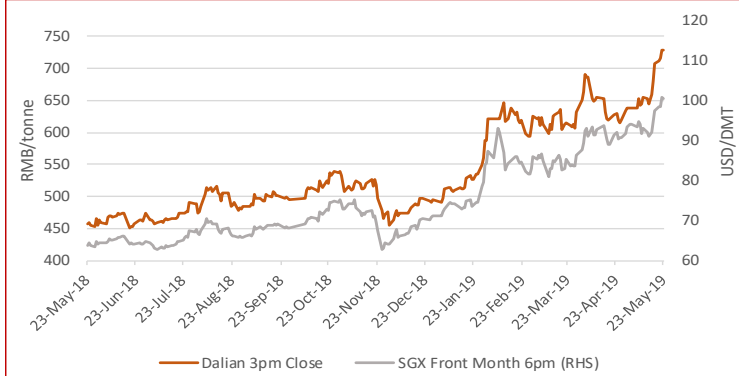
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending May 17th, 2019				
Province	This week	Change %	Low ²	High ²
Jingtang	14.44	-3.41%	13.29	18.10
Qingdao	15.95	-0.68%	15.94	19.50
Caofeidian	17.65	1.38%	16.30	21.10
Tianjin	7.56	-1.56%	7.39	10.48
Rizhao	14.16	-4.00%	14.00	19.00
Total (35 Ports)	123.67	-0.67%	123.67	147.56

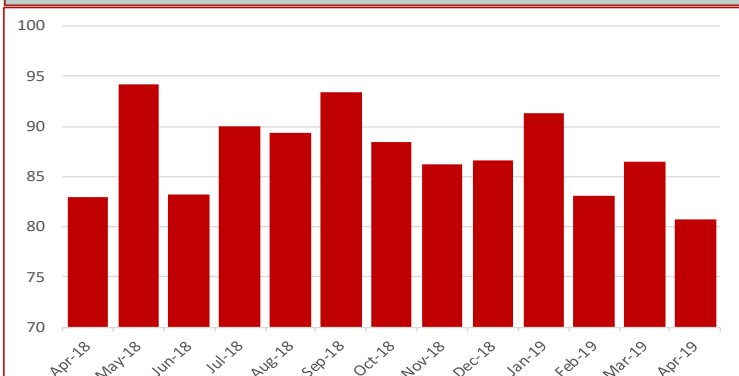
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	May 23rd 3pm close			23rd May Feb 6 pm		
Contract	I1909	Change	Change %	Jun'19	Change	Change %
Closing Price	728.50	0.5	0.07%	100.34	-0.52	-0.52%
Vol traded ('000 lots)	225.00	-94.9	-29.67%	14.22	-3.48	-19.68%
Open positions ('000 lots)	170.22	-0.6	-0.36%	126.32	-2.67	-2.07%
Day Low	723.5	14.5	2.05%	99.93	-1.21	-1.20%
Day High	735.0	2.0	0.27%	101.16	2.39	2.42%

DRY BULK FREIGHT RATES (USD/MT)



TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)

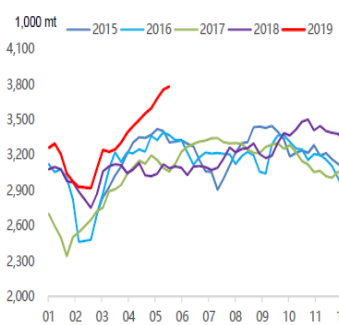


STEEL SPOT MARKET PRICES—CHINA

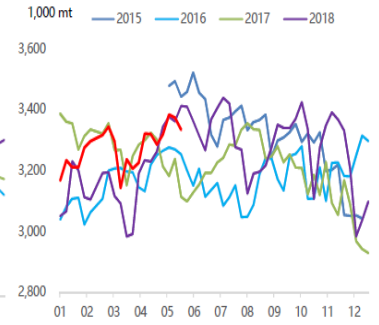
Steel Spot Market RMB/tonne

Product	17/5/2019	Change	Change %
ReBar HRB400 φ18mm	4,070.0	-30	-0.73%
Wirerod Q300 φ6.5mm	4,270.0	-30	-0.70%
HRC Q235/SS400 5.5mm*1500*C	4,030.0	-20	-0.49%
CRC SPPC/ST12 1.0mm*1250*2500	4,280.0	-30	-0.70%
Medium & Heavy Plate Q235B 20mm	4,080.0	-30	-0.73%
GI ST02Z 1.0mm*1000*C	4,620.0	-20	-0.43%
Colour Coated Plate	7,200.0	0	0.00%

Weekly output of rebar



Weekly output of hot-rolled coil



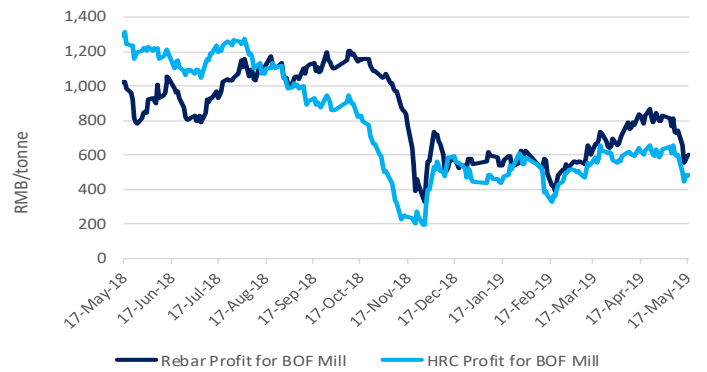
CHINESE STEEL MILL PROFITABILITY

SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)

Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	97.20	3.00	Mmi CFR Equivalent index for 1st Feb
Coke	2,110	100	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,210	-40	steel scrap (6mm) in Zhangjiagang, exl. tax
Billet Cost	3,221	100	Q234, incl. tax
Rebar cost - Blast furnace	3,468	100	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	602	-140	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,546	100	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	484	-120	based on Shanghai prices, incl. tax

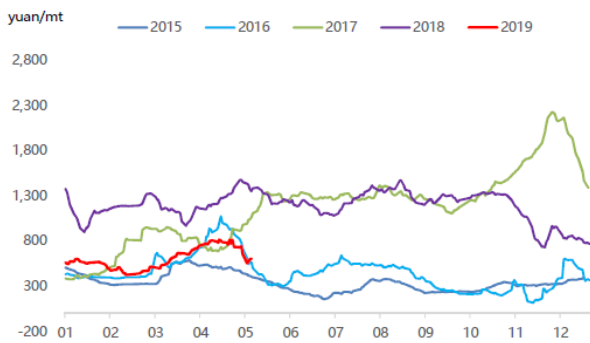
Note: 1. Costs in the table are calculated based on today's market prices and fact our management, sales, financial and depreciations fees.
2. The cost refers to average cost in the industry based on SMM's survey of small, medium and large mills in China

CHINESE STEEL MILL PROFITABILITY

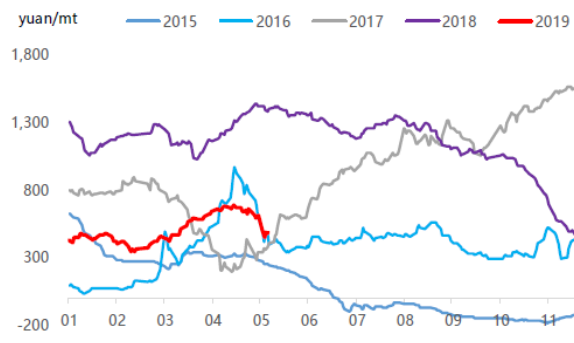


CHINESE STEEL MILL PROFITABILITY

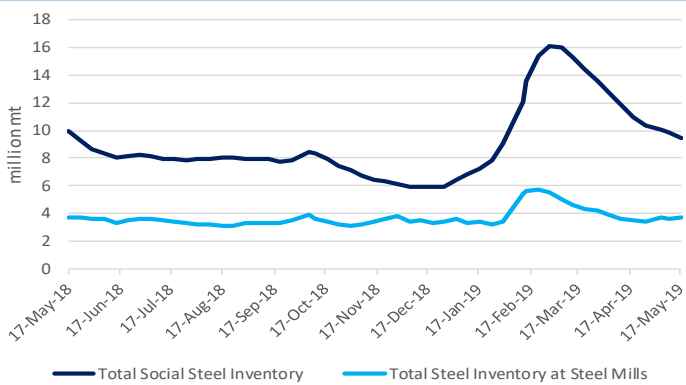
Rebar profits



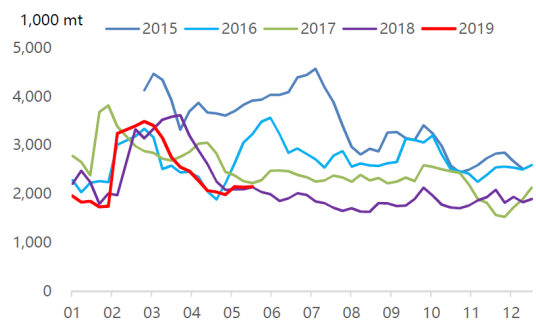
Hot-rolled coil profits



CHINESE STEEL INVENTORIES



In-plant inventory of rebar



IRON ORE INDEX SPECIFICATIONS, COMPILATION RATIONALE AND DATA EXCLUSIONS

Iron Ore Index Specifications (Port and Seaborne)					Iron Ore Index Compilation Rationale and Data Exclusions
	65% Fe Fines	62% Fe Fines	58% Fe Fines	62.5% Fe Lump	MMi iron ore indices are compiled from data provided by companies that are part of the iron ore supply chain and involved in spot market transactions. The indices are calculated using detailed transaction-level data submitted to MMi by these companies. This data is normalised to the appropriate specifications and screened to remove outliers before volume-weighted average prices are calculated from the remaining core set of data. For more details on MMi's iron ore methodology please download the guide published on our website at: www.mmiprices.com
Fe %	65.00	62.00	58.00	62.50	
Alumina %	1.40	2.25	2.25	1.50	
Silica%	1.50	4.00	5.50	3.50	
Phosphorus %	0.06	0.09	0.05	0.08	
Sulphur %	0.01	0.02	0.02	0.02	
Moisture %	8.00	8.00	9.00	4.00	
Sizing	Granular size below 10mm for at least 90% of cargo; maximum of 40% below 150 micron			Size below 6.3mm max 15% Size above 31.15mm max 25%	
Pricing Point	Qingdao Port (FOT and CFR respectively)			FOT Qingdao Port	
Timing (Seaborne)	Loading within 4 weeks, Delivery within 8 weeks			Delivery within 2 weeks	
Payment Terms	L/C at sight			L/C at sight or CAD	
Data Exclusions*					
	62%	58%	65%		
Port Index	0	0	0		
Seaborne Index	0		0		
Lump Index 62.5	0				
* Number of price submissions for iron ore indices that were excluded from index calculations today as they were anomalous and could not be verified					

IRON ORE DOMESTIC CONCENTRATE INDEX CALCULATION METHODOLOGY

The compilation method for price index generally refers to the compilation method of CPI price index and other price indices, breakdown the price data and calculate the average value according to a certain method, taking the vertical axis as the regional composite index (average of different grade index) and the horizontal axis as the grade composite index (average of different regional index), a total composite index for domestic ore can be output ultimately. The process system is also adopted in the calculation i.e. each sub-index can be obtained as well.

AVERAGE IRON ORE SPECIFICATIONS APPLIED FOR BRAND PRICE ASSESSMENTS

PORT STOCK BRANDS						SEABORNE BRANDS					
May 23rd, 2019	Specifications applied for 62% brand assessments						Specifications applied for 62% brand assessments				
	Fe	Alumina	Silica	Phos	Moisture		Fe	Alumina	Silica	Phos	Moisture
Roy Hill	61.16%	2.25%	4.61%	0.052%	9.35%	Roy Hill	60.70%	2.30%	4.90%	0.055%	8.00%
SIMEC Fines	60.00%	2.30%	6.30%	0.060%	6.00%	SIMEC Fines	60.00%	2.30%	6.30%	0.060%	6.00%
PB Fines	61.55%	2.35%	3.79%	0.100%	9.28%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	10.00%
Newman Fines	62.55%	2.28%	4.07%	0.093%	7.33%	Newman Fines	62.80%	2.20%	4.30%	0.080%	6.40%
MAC Fines	60.83%	2.24%	4.89%	0.084%	7.74%	MAC Fines	61.00%	2.70%	4.70%	0.110%	9.30%
Jimblebar Blended Fines	60.89%	3.01%	4.47%	0.111%	7.36%	Jimblebar Blended Fines	61.79%	2.67%	4.08%	0.115%	7.16%
Carajas Fines	65.44%	1.30%	1.43%	0.084%	8.33%	Carajas Fines	65.10%	1.50%	1.70%	0.080%	8.50%
Brazilian SSF	62.00%	1.00%	6.50%	0.040%	6.00%	Brazilian SSF	62.00%	1.00%	6.50%	0.040%	6.00%
Brazilian Blend Fines	62.82%	1.40%	4.79%	0.072%	8.37%	Brazilian Blend Fines	62.50%	1.50%	5.00%	0.070%	7.00%
RTX Fines	61.00%	3.10%	4.50%	0.135%	7.50%	RTX Fines	61.00%	3.10%	4.50%	0.135%	7.50%
May 23rd, 2019	Specifications applied for 58% brand assessments						Specifications applied for 58% brand assessments				
	Fe	Alumina	Silica	Phos	Moisture		Fe	Alumina	Silica	Phos	Moisture
SSF	56.76%	3.05%	6.08%	0.053%	8.78%						
FMG Blended Fines	58.18%	2.68%	5.54%	0.062%	7.51%						
Robe River	56.28%	2.91%	5.58%	0.035%	9.29%						
Western Fines	57.88%	2.87%	7.50%	0.062%	7.45%						
Atlas Fines	56.59%	2.55%	7.14%	0.080%	8.46%						
Yandi	57.13%	1.80%	6.42%	0.047%	8.59%						

BLOOMBERG TICKERS

PORT STOCK INDICES			
	FOT Qingdao (RMB/wet tonne)		CFR Qingdao Equivalent (USD/dry tonne)
IOP162	IRCNQ001		IRCNQ004
IOP158	IRCNQ002		IRCNQ005
IOP165	IRCNQ003		IRCNQ006

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